

SEQUENCE LISTING

<110> Schall, Thomas J.  
Penfold, Mark E.T.  
ChemoCentryx, Inc.

<120> Methods and Compositions Useful for Stimulating an  
Immune Response

<130> 019934-001610US

<140> US 10/061,943  
<141> 2002-02-01

<150> US 60/265,925  
<151> 2001-02-02

<160> 34

<170> PatentIn Ver. 2.1

<210> 1  
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<212> DNA  
<213> Rhesus cytomegalovirus

<220>  
<223> rhesus monkey (Macaca mulatta) cytomegalovirus  
(rhCMV) short unique region 28.1 (rhUS28.1) coding  
sequence

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tgcacatgtgt tagtcaagaa acgcaaaactg cgatattcca gcgatgttta ttttttccac 180  
gcctctatgg ccgacctcgt cagcaactgtc atgctaccgc tctggctaca ttatgttctc 240  
aactttgccc aactctctcg aggagcctgt atcagctttt cggtgacttt ctatgttccc 300  
cttttcgttc aggccctggtt atcattttcc atcgctatgg agcgatattc caacttagta 360  
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tctgccttcg tggcatacc ctactacgca tacagaaact cacacgacga acacgaatgc 480  
attcttagaa actacacttg gcacattaac gaaccgctac acacgtgtat ggatgtggtg 540  
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ctagttgtca tgcacgtgtt cttttggggta ccgtttaata tcgtgttgggt tattgacaat 720  
attttacaga gatactatga taccacgaat tgcgtatgtt aaaaagattaa acatataatg 780  
gctatgtatct cagaagccat tttttatgtt cgcgttata cagcacat tatttatgtt 840  
gggatttagtg gcagatttcg cgaagagatt tactctctgt ttagacgcca gccgtataac 900  
gatttggacc ccgatgccaa tcaattcatg attgaactca ctggccaggg aagaagtata 960  
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<210> 2  
<211> 1002  
<212> DNA  
<213> Rhesus cytomegalovirus

<220>  
<223> rhesus monkey (Macaca mulatta) cytomegalovirus  
(rhCMV) short unique region 28.2 (rhUS28.2) coding  
sequence

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atacttttgg ttttgttac cagacgcata cactggttcg caaatgacat ctactatctc 180
aacatgatct ttacagactt tcttgtttc attacattac cgcctgggt ttactacgt 240
ctgaattaca cacaactctc acactatgcc tgcattgctc tatcatttgt tttttagt 300
tccattttta ttcaagctga ctttatggta gcagtggtc tcgagcgtta tcgaagccta 360
gtgaaaaaaca aacccttag cgtaaaaaaa gccagcgtca gtcgcgcgtg catctggatc 420
attgttatta tagtgtcttc accatactac atgttttagat cgcaacacga aacaaatct 480
tgcattctag gaaactacac ctggcatatg aacagtcctt ttcgcaccac aatggacgca 540
tccattaaaca ttggctttt tgcgttccg gccgtgacga ctttgttaat agccagacga 600
atttatgtat gtacttcagg caaaaaaaaaa atgaacgcga gagccagtggtt 660
gccatggtga ttagcatgtt attctcgga ggactttca acctgaacat tttcgagac 720
atagttcgg acacatcgga agacaataaa gactgcacat atcttaagca ggaacactt 780
attcgcatgg tcggtgtggc cctcggttac gggcgcgctt tattcaaccc ttttatgtat 840
atgtgtgtga gtaccagatt ggcacaaagaa ataaaaatgtt tggttatgcg aatacctt 900
gaaacactag atgcagaaca cgctaaactc atggtaatt taaaaaaacag aaatgctaat 960
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<210> 3  
<211> 1014  
<212> DNA  
<213> Rhesus cytomegalovirus

<220>  
<223> rhesus monkey (*Macaca mulatta*) cytomegalovirus  
(rhCMV) short unique region 28.3 (rhUS28.3) coding  
sequence

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attgtgtgc tcagcgtgct cgtcgtaaaa cgcaagctca agttccgaa tgacattac 180
tttttcaacg cgtcttggc agacgtttt ggcgtctgca tggccgcctc ctgggttaac 240
tatgcactgg actccacaca acttagcaag ttctcatgta tcactttac gtttggtttt 300
tacgtctccc tggcatcaca ggcctggatg ctcattctgg tcaccctgga gcgatacgg 360
tctctagtct ggatcgcccc gatcaccaga aacaaagcca tagcgaattt tgtaactttt 420
tggcttggc ccatcttctt ggccgcaccc tactactttt ttagaaacga aagcaacgaa 480
caccatgca tcatgagaaa ctatacctgg agcgttgggaa acatggca catagccctg 540
gatttcttaa ttacgctcat tacatttatac atgcccagtga ctattgtttt agctctgagt 600
ttcaaaatgg ccagatggtc aaccttggta tacagaaacc tcaccagcag aaccagtctt 660
atccttattt tgatactgac agtagcagca gggttctggg gacctttca cctattttatg 720
tttataaaaa acgtggcagg gcagatttac cacattcaaa aggattgtgt gtaacttacag 780
ctcagacact tggtagctt gatgaccgaa acccttagtgtt ttctacgttc agtttttaac 840
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cgtaactcagt atgatgctt ggacacgact cagtttagcag aaactatgca gctgaaagcg 960
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<210> 4
<211> 987
<212> DNA
<213> Rhesús cytomegalovirus
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<220>  
<223> rhesus monkey (*Macaca mulatta*) cytomegalovirus  
(rhCMV) short unique region 28.4 (rhUS28.4) coding  
sequence

<400> 4

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 accgataca cgtgcgttt tctgttcggg attctggac actttactt gtattggaaa 120  
 aaccatcaga gacgacacccg gacaaacagt ttcagtatcg ttttatttcg acatctcatg 180  
 atcaccgaag aggtcttac cctcaccatt cccgtctggg cgatcactt aactactcac 240  
 ggcaacttac cgggctcgtg gtggcgaagt ctcaccccg tttttatct aacggatttc 300  
 gctcgctcct tcttttaccc gctcctcatc tgggaccgat acagcgtaat catctgcaga 360  
 caccctctcc ccgttaatct gaactacagt caggtcatag gctgtctgt ctggctgggt 420  
 gccgtactgt cagcatcacc gtttccatt ttaacggaa gtgtgaaaca atgcctgggc 480  
 aacatgggca gcatacccg cgaatcgct gccgttctta acctggaaagt gcacctgtgc 540  
 tccttctggt taccgctcat catgtcggt aactgttact accaagcaaa acgcccggca 600  
 tcgcctgacc aactccacga actttaccga tgcagttgc taattaccat tatcacaact 660  
 tacgctatcg tatggttcc tttccatctc gctttactca tagacgcccgt gattagcata 720  
 agccatgttag aaccctcttag cgctctccac tgggcatcca ttgtcggtac ctgtaaatca 780  
 tttacatttg tatatgcggg cataagccca ctatgttact tcacatgctg ccccacccgt 840  
 cgtcgcgaac tgctgatgtc tctacgttca ttcttccactt ggatttccag caaaacgcgg 900  
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 aagtccaccgc acctgttaaa cgaataa 987

<210> 5  
 <211> 1452  
 <212> DNA  
 <213> Rhesus cytomegalovirus

<220>  
 <223> rhesus monkey (Macaca mulatta) cytomegalovirus  
 (rhCMV) short unique region 28.5 (rhUS28.5) coding  
 sequence

<400> 5

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 accacgatga caacgaagac aagcactcct ggcaatacaa ctactggcac tacgtccacc 120  
 ctgacaacga tatcaacaac ttctaatgct accaggataa cgtctaattt aagcaactacc 180  
 ggaaacccaa ctgcaactac caatgtact accttcagtt ccacattaac aacatctaca 240  
 aataataagca gtacatttc gacagtttctt accgtcgcat ccaatgcac atgttaattct 300  
 acaatcacaa cgaatattac aactgtttt actacagcag caaacactac cgcaagcagc 360  
 ctcaccagca tcgtaacttc acttgccact accattgaaa ccacatcatt tgattatgt 420  
 gagtcagcag aagcttgc当地 ctaacagac atcgttcata ctactagatc agtgcacgtt 480  
 actttctata ctatcatatt catactcgcc cttttggaa actttctgtt tcttatgacc 540  
 atcatttgaa accgtcgcat ttccctttag gttgaaatat atttcgttta tctagcaatc 600  
 tccgatctt tggatgtatg tactttacca ttttggataa tggatcttct tgagcacgac 660  
 gtcatgtcac atgcattctg tggatcaatg acagccattt tttattgcgc gctgtttgcc 720  
 agcaactgttt tcctcttgct aattgtttt gacagatgtt acgctattct attaggtaca 780  
 gaaaaagcaa atagacgttt attgcgaat gctgtttctg gatgcacgtt catgtggggaa 840  
 ttgtgttca ttttagcatt acctcatttt atctttatga agaaaggaac caacgtatgt 900  
 gtgcagcagat atgaaccagg acttaacaat ttctatgtt tttttatcaa tactgagggt 960  
 aacctatgca ccctagttt gccagccgca gccattatct actggtatct taaactaacc 1020  
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 ttatgtccac acagatcctg gagttccata cgtgcagaga cgggtgtccat cagtcgtcagt 1380  
 cactcacagg tatctgcattc atctgaggat gatgacaacg atgtgcatttga tgaattgcaa 1440  
 ttttaattt ga 1452

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<211> 990  
<212> DNA  
<213> Rhesus cytomegalovirus

<220>  
<223> rhesus monkey (Macaca mulatta) cytomegalovirus  
(rhCMV) long unique region 33 (rhUL33) coding  
sequence

<400> 6  
atgaccaatc tttactctgc caatttctc accttgatag tacttccttt tatacgaaaa 60  
agcaatcaac accttttacc tgccagtgc gtaacctgt aatttctctc cctgttgc 120  
tactctagct gcagcgtagg ttttgcata gtggcactga tagcggccga ccgataccga 180  
gtgattcatc gccgaactca agctcgccaa tcctaccgt aacatataat gatagtaggc 240  
ttaacgtggc tcattggctt gatctgcgtt acccccgggg gggctcacac aaccattgt 300  
gctcaccgcg atggggaaag tgatgctcaa agacacaata ctgcattat gcaacttgcg 360  
tatgtgaag ttacgtcct catggctgg aaacttctca tcgttttagt ctggggcata 420  
gtgccagttg tcatgtatgag ctgggtttac gcgtttttt acaatactgt acaaagaaca 480  
gccaaaaaac aacaacgtac gttgaaattt gtaaaggat tactcctgtc attcatcatc 540  
atccaaactc cctatgtgtc aatcatgatt ttaacacgt atgcacccgtt aggatggccg 600  
atggaatgcg ccgatctaac tagacgcgca gtcataaca cgttttcccg tctcgcccc 660  
aatctacatt gcatggtcaa ccccatcctc tacgctctca tggaaatga ctgggtgtct 720  
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caacaagccc gcaactcgga cgatgtaccg acaattgtca gtcaacaacc cgccacacccc 840  
accatcgtca ataagccccg aaaaaaccccg cacgtaaaac gcggtgttac tttcagcgtc 900  
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atgtcccacc aaaacctacg tctgacgtga 990

<210> 7  
<211> 1328  
<212> DNA  
<213> Rhesus cytomegalovirus

<220>  
<223> rhesus monkey (Macaca mulatta) cytomegalovirus  
(rhCMV) long unique region 33 (rhUL33) spliced  
coding sequence

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ttatggaaac cattcttcac aaccgaacga gtgaaactaa ttccatattt cacatcaaca 180  
ccacctgcaa tggaccgac tcactgtacg cccgcactt aggccaagcc ctcgtgaaca 240  
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ctcgccaaatc ctaccgttaac acatataatgtat tagtaggtt aacgtggctc attggcttga 600  
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aaaacccgca cgtaaaaacgc ggtgtatctt tcagcgtcag cgcacatcttcc gaactcgcag 1260  
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tgacgtga 1328

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<211> 1140  
<212> DNA  
<213> Rhesus cytomegalovirus  
  
<220>  
<223> rhesus monkey (Macaca mulatta) cytomegalovirus  
(rhCMV) long unique region 78 (rhUL78) coding  
sequence

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gccgttggc attacacagg gaacctgggtt ttgactcagg tcatactgtat cttctccatg 180  
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<210> 9  
<211> 2100  
<212> DNA  
<213> Rhesus cytomegalovirus  
  
<220>  
<223> rhesus monkey (Macaca mulatta) cytomegalovirus  
(rhCMV) long unique region 33 (rhUL33) splice  
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upstream and 200 nucleotides downstream of the  
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<222> (603) .. (752)  
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<221> intron  
<222> (753) .. (830)

<220>  
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<222> (831)..(2006)  
<223> exon 2

<220>  
<221> misc\_feature  
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gtatttcgaa catattgtta gatatacgta gtaaagaatc ttctaaagcc atgacgtctt 180  
tctgacgaag ttgaataaaat tctatctac cagtacccaa aggctgacac tcagacaact 240  
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acagaaaaccg gaaatttcac gagatacggc tggttcagcg ttctgctatc cgtccaggcg 720  
ggttatggaa accattcttc acaaccgaac ggtgagtgac atttaagaca gtttaatagc 780  
caacactcgt aacgtctcgg aagctgataa gtttcgtttt tccacagagt gaaactaatt 840  
ccattttgca catcaacacc acctgcaatg tgaccgactc actgtacgcc gccaaactag 900  
gcgaagccct cgtgaacagc ggcgttagctt tattcggtac ccccccctcaac gccatcgtcc 960  
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accgcgatgg ggaaagtgat gctcaaagac acaatacttg cattatgcac tttgcgtatg 1380  
atgaagttt cgtcctcatg gtctggaaac ttctcatcg tttgtctgg ggcatactgc 1440  
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aaggccgcaa ctggacgat gtaccgacaa ttgtcaatc acaacccggc acacccacca 1860  
tcgtcaataa gcccggaaaa aacccgcacg taaaacgcgg tggatcttc agcgtcagcg 1920  
catttccga actcgacgcg gccaaaaaaag ccaaagacaa agccaagcgg ctttccatgt 1980  
cccaccaaaa cctacgtctg acgtgaattt tcctagaggc tgcctccacg ggtttacata 2040  
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<210> 10  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:human  
cytomegalovirus (HCMV) long unique region 146  
(UL146) CXC (alpha) chemokine homolog (vCXC1)  
clinical strain conserved structural motif

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<400> 10
Glu Leu Arg Cys Xaa Cys
 1           5

<210> 11
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:human CMV
      strain AD 169 AD27/28 PCR amplification primer
      AD27up

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<210> 12
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<223> Description of Artificial Sequence:human CMV
      strain AD169 AD27/28 PCR amplification primer
      AD28low

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<210> 13
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<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:human CMV
      strain AD169 AD27/28 PCR amplification primer
      AD28up

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<220>
<223> Description of Artificial Sequence:human CMV
      strain AD169 AD27/28 PCR amplification primer
      AD29low

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<210> 15
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:human CCR7
      receptor CCR7.1 PCR amplification primer ccr7up

<400> 15
gcgaattcag cgtcatggac ctgggg                                26

<210> 16
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:human CCR7
      receptor CCR7.1 PCR amplification primer ccr7low

<400> 16
tggaaattcag aagagtcgcc tatggg                                26

<210> 17
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:murine CMV PCR
      amplification primer S78.1

<400> 17
ataagaatgc ggccgctcga ctacatgctg ctgc                                34

<210> 18
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:murine CMV PCR
      amplification primer S78.2

<400> 18
cggaattccg tccggctgct gcgcttcttc                                30

<210> 19
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:murine CCR7
      receptor (mCCR7) PCR amplification primer mCCR7up

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<400> 19  
ataagaatgc ggccgctgac ccagggaaac ccagg 35

<210> 20  
<211> 33  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:murine CCR7  
receptor (mCCR7) PCR amplification primer mCCR7low

<400> 20  
cggaattccg tcagtcctg ggagaggtcc ttg 33

<210> 21  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:human CMV  
strain AD169 PCR amplification primer 108 up

<400> 21  
gcggtaccgc gacgccgtcg ctggg 25

<210> 22  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:human CMV  
strain AD169 PCR amplification primer 108 low

<400> 22  
tggatccgtc agggaaatac aag 23

<210> 23  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:human CMV  
strain AD169 PCR amplification primer 109 up

<400> 23  
atggatccctc ttctatcacg gtggc 25

<210> 24  
<211> 25  
<212> DNA  
<213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence:human CMV
      strain AD169 PCR amplification primer 109 low

<400> 24
gcggatccag gatcgatttc gtgcg                                25

<210> 25
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Bacillus
      anthracis protective antigen (BAPA) PCR primer
      BAPAup

<400> 25
ggcccgggga agttaaacag gagaaccg                                28

<210> 26
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Bacillus
      anthracis protective antigen (BAPA) PCR primer
      BAPAlow

<400> 26
gggatatctt accttatacct atctcat                                27

<210> 27
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:complementary
      oligo containing Ig kappa leader sequence

<400> 27
ctagcatgga gacagacaca ctccctgctat gggtaactgct gctctgggtt ccaggttcca 60
      ctggtgaccc                                70

<210> 28
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:complementary
      oligo containing Ig kappa leader sequence

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<400> 28
ccgggggtca ccagtggAAC ctggAACCCa gagcagcAGT acccatAGCA ggagtgtgtc 60
tgtctccatg                                         70

<210> 29
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:rhesus CMV
      strain Rh68.1 Rh32/33 PCR amplification primer
      Rh32up

<400> 29
cggaaattcct ctttagtcgg cagggtctt                                         29

<210> 30
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:rhesus CMV
      strain Rh68.1 Rh32/33 PCR amplification primer
      Rh33low

<400> 30
ctggatccgt ggctttgtct ttggcttt                                         29

<210> 31
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:rhesus macaque
      SLO RhCMV immediate early 2 gene nested PCR primer

<400> 31
gccaatgcat cctctggatg tattgtga                                         28

<210> 32
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:rhesus macaque
      SLO RhCMV immediate early 2 gene nested PCR primer

<400> 32
tgcttgggga atctctgcac                                         20

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<210> 33  
<211> 22  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence:rhesus macaque  
SLO RhCMV immediate early 2 gene nested PCR primer  
  
<400> 33  
cccttcctga ctactaatgt ac

22

<210> 34  
<211> 20  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence:rhesus macaque  
SLO RhCMV immediate early 2 gene nested PCR primer  
  
<400> 34  
ttgggaaatc tctgcacaag

20